

REMARKS

Applicants thank the Examiner for discussing the present case with Applicants' representatives on May 18, 2005. *See Attached Statement of Substance of Interview.*

As a preliminary matter, claim 13 is objected to for the reasons set forth at the top of page 2 of the present Office Action. Applicants amend claim 13, as indicated herein, to change the word "claims" to "claim".

Claims 1, 3-7 and 11-18 are all the claims pending in the present application. The Examiner maintains substantially the same arguments set forth in the previous Office Action, and adds a few new arguments in the *Response to Arguments* section of the Office Action. Specifically, claims 1, 3-7 and 11-18 remain rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. Claims 1, 3-7 and 11-18 remain rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Claims 1, 3 and 15 remain rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Baun (DE 3610519). Finally, claims 4-6 and 16-18 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Baun.

§112, first paragraph, Rejections (Written Description) - Claims 1 and 3-7

With respect to the 35 U.S.C. § 112, first paragraph, rejections, the Examiner states (in the *Response to Arguments* section):

...While Applicant is indeed entitled to claim the actuator broadly, this does not excuse Applicant from the requirement to provide an adequate written description of the claimed invention. It is not enough to suggest that any and every possible actuator may be used. The description should set forth the manner in which the claimed invention is embodied. Further, Applicant argues that "several examples of the actuator are directly disclosed". However, these examples of actuators are not disclosed

specifically for use in applying vibration in the "width direction" (claim 1, line 6) and the "load support direction" (claim 3, line 2; claims 15-18, lines 2-3) of the tire. No description is provided of how such actuators would be interrelated with a vehicle tire in order to apply vibration in the width and load support direction.

In response, Applicants maintain the arguments set forth in the previous Amendment.

That is, Applicants maintain that the specific details of the actuator do not constitute part of the invention and are not claimed, and therefore the Examiner's preoccupation with this point is simply misplaced. Secondly, the actuator may take on various different forms, and applicants do not intend to be limited to any particular form of actuator, so long as it can perform the stated function of inducing micro vibration as described in the specification. Thirdly, the Examiner is simply incorrect in stating that the constitution of the actuator is not described. In fact, several examples of the actuator are directly disclosed. These include, without limitation, a counterweight on a rotor, an eccentric rotor, a function generator which imposes a vibration waveform on a wheel drive motor's DC output, a generator which imposes a vibration waveform on a steering torque signal of the power steering motor, etc, etc. It is beyond the understanding of the undersigned how the Examiner can maintain that the inventors were not in possession of the claimed invention in view of these disclosures and the working examples given in the specification.

Yet further, Applicants respectfully submit that a description as filed is presumed to be adequate, unless or until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption. See, e.g., *In re Marzochhi*, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). The Examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's

disclosure a description of the invention defined by the claims. *In re Wertheim*, 541 F.2d 257, 263, 191 USPQ 90, 97 (CCPA 1976). In the present instance, at best, the Examiner has simply shown that he does not understand the description of the invention, but the Examiner has not even come close to fulfilling his burden of establishing by a preponderance of evidence why one skilled in the art would not understand the manner in which vibration is applied in the “width direction” and the “load support direction” of the tire. Therefore, at least based on the foregoing, Applicants respectfully request that the Examiner withdraw his rejections of claims 1 and 3-7 under 35 U.S.C. § 112, first paragraph.

§112, second paragraph, Rejections (Indefiniteness) - Claims 1 and 3-7

With respect to the 35 U.S.C. §112, second paragraph, rejections, the Examiner still takes issue with “response frequency,” and states:

...page 4, lines 5-9 fails to set forth such a definition, nor does any other portion of the specification provide any such definition. Further, Applicant argues that the above definition is "well known in the art". However, Applicant provides no support from either the specification or the prior art for this assertion. Furthermore, it would appear that many different definitions could be associated with the generic term "response frequency". For example, the response frequency could be defined in terms of a vehicle's roll rate, pitch rate, vibration rate, etc. Still further, Applicant asserts that the definition of "response frequency" is "very obvious for a skilled person", but again applicant provides no evidence that supports this assertion. Finally, applicant states that the response frequency "can be considered to fall in the range of up to 10 Hz". However, no support for this frequency range is cited from the specification or any other source.

In response, Applicants maintains that the frequency band of the “response frequency of change in behavior of the vehicle” is lower than the frequency range which can be followed up by the vehicle body at the time when the control established by means of the braking and driving

control such as the ABS control, or the control is established by means of a hydraulic or pneumatic control such as the active suspension; or lower than that of the inherent resonant frequency (of the vehicle body) above the spring of a mechanical suspension, say falling in the range of 0.1-2Hz. Since the above is well known in the art, Applicants maintain that “response frequency of change of behavior of the vehicle” does not render claims 1 and 3-7 indefinite.

Applicants submit that on pages 250-263 of Japanese Publication “Dictionary of up-to-date Technology of Automobile,” (Asakura Bookseller), by Iguchi, § 5.2, descriptions on “response frequency of change in the behavior of the vehicle” are given. Applicants are in the process of obtaining translations of the descriptions set forth in this Japanese publication and/or finding a comparable English-language publication that further describes “response frequency of change of behavior of the vehicle.”

§102(b) Rejections(Baun) - Claims 1, 3 and 15

The Examiner maintains the rejections of claims 1 and 3 over Baun for substantially the same reasons set forth in the previous Office Action. Claim 15, which was added in the previous Amendment, is also rejected as allegedly being anticipated by Baun. The Examiner also adds a few new arguments in the *Response to Arguments* section of the Office Action.

In the *Response to Arguments* section, the Examiner alleges:

Applicant argues that Baun's system fails to control the coefficient of friction. The Examiner disagrees because Baun's discussion of improving the "grip" of the wheel is synonymous with improving the coefficient of friction. If the coefficient of friction was not improved, then Baun's system would be unable to improve the grip of the wheel on slippery roadways, as stated in the abstract.

In response, with respect to claim 1, Applicant amends this claim for clarification reasons, as set forth herein, and Applicant submits that the Examiner appears to have

misunderstood the arguments set forth in the previous Amendment. That is, the specific argument is that mere application of micro-vibration in only the up and down direction, as set forth in Baun, cannot produce the effects produced by the present invention. Baun does teach reducing the braking distance or increasing the starting torque so as to improve the grip performance of the tire (Applicants do not traverse this point); however, such is achieved in Baun by increasing the contact pressure between the tire and the surface of a road that is caused as a result of application of a vibration having an intermediate and high frequency, in only an up and down direction. Thus, in Baun's system, it is essentially impossible to effectively control the coefficient of the friction force between the tire and the surface of a road because Baun does not teach the specific limitation set forth in the present invention, as recited in amended claim 1.

Dependent claims 3 and 15 are patentable at least by virtue of their dependency from independent claim 1. Further, with respect to claim 15, the Examiner does not even address the particular limitations set forth in this claim.

Therefore, at least based on the foregoing, applicants submit that claims 1, 3, and 15 are patentably distinguishable over Baun.

§103(a) Rejections (Baun) - Claims 4-6 and 16-18

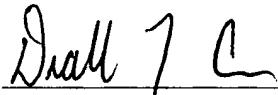
With respect to the obviousness rejections, the Examiner repeats the same arguments set forth in the previous Office Action.

Applicants maintain that dependent claims 4-6 and 16-18 are patentable at least by virtue of their respective dependencies. Further, with respect to claims 16-18, Applicants submit that the Examiner does not even address the specific limitations set forth in these claims.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Diallo T. Crenshaw
Registration No. 52,778

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

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